ELSEVIER

Nuclear Engineering and Design 157 (1995) 489–491

Nuclear Engineering and Design

Contents of Volume 157

CONTENTS OF ISSUES 157(1–2)

Extended and Updated Selected Papers from SMiRT-12, Division E

Guest Editor: A. Imazu and A. Hoffmann

Preface ix

Crack initiation under creep and creep-fatigue on CT specimens of an austentic stainless steel, *L. Laiarinandrasana, R. Piques, B. Drubay and C. Faidy* 1

Development of the core-bowing reactivity analysis codes system ATLAS and its application to a large FBR core, *M. Nakagawa, H. Endo and M. Kawashima* 15

Pseudo-dynamic buckling experiments on thin cylindrical shells under biaxial seismic loads, *M. Nakagawa, M. Fukuyama, K. Ishihama, H. Ikeuchi, Y. Hagiwara and H. Akiyama* 27

Development of SAFA, a seismic analysis program for FBR core components, *T. Horiuchi, M. Nakagawa and H. Kasai* 37

Experimental and analytical studies on the multi-surface sloshing characteristics of a top entry loop type FBR, *K. Kimura, K. Ogura, T. Mieda, K. Yamamoto, Y. Eguchi, S. Moriya, Y. Hagiwara, M. Takakuwa, T. Kodama and K. Koike* 49

An evaluation method for elastic–plastic buckling of cylindrical shells under shear forces, *J. Okada, K. Iwata, K. Tsukimori and T. Nagata* 65

Regular Papers

Engineering Mechanics

Local stress factors of a pipe-nozzle under internal pressure, *J.L. Ha, B.C. Sun and B. Koplik* 81

Flow-induced vibration test of an advanced water reactor model. Part 1: turbulence-induced forcing function, *M.K. Au-Yang, B. Brenneman and D. Raj* 93

Materials Engineering

The importance of the triaxiality modified *J* concept for the assessment of pressurized components with surface flaws, *Gh. Moussavi Zadeh, K.-D. Hardtke, P. Wossidlo and K. Wobst* 111

Determination of conditions leading to localized corrosion initiation on UNS S32100 (AISI 321) stainless steels in nuclear power plant environments, *J. Bystrianský, J. Bárta, M. Tvrdý and K. Malaník* 123

Nondestructive characterization of materials (ultrasonic and micromagnetic techniques) for strength and toughness prediction and the detection of early creep damage, *G. Dobmann, M. Kröning, W. Theiner, H. Willems and U. Fiedler* 137
Reactor pressure vessel structural integrity research, *W.E. Pennell and W.R. Corwin* 159

Thermal-Hydraulics, Safety and Risk Analysis

Calculation of a materials relocation experiment simulating a core disruptive accident condition in fast breeder reactors, *T. Sawada, H. Ninokata and A. Shimizu* 177
Analytical prediction of subchannel friction factor for infinite bare rod square and triangular arrays of low pitch to diameter ratio in turbulent flow, *K.B. Lee* 197
Gravity-driven countercurrent two-phase flow during filling of an unvented vessel, *B.K. Kamboj, E.M. Ritenour, S.M. Ghiaasiaan and S.I. Abdel-Khalik* 205

Fuel Engineering

Irradiation behavior of HTGR coated particle fuel at abnormally high temperature, *K. Fukuda, S. Kashimura, T. Tobita and T. Kikuchi* 221

Instrumentation and Control

Austenitic steel piping testing exercises in PISC, *S.R. Doctor, P. Lemaitre and S. Crutzen* 231
Inspection procedure assessment using modelling capabilities, *V. Schmitz, K.J. Langenberg, W. Kappes and M. Kröning* 245
Structural integrity significance of round robin testing trials. Application to PISC III Action 3, *S. Reale and L. Tognarelli* 257
KESS–a modular program system to simulate and analyze core melt accidents in light water reactors, *A. Schatz and K.-D. Hocke* 269

Technical Engineering Note

Modeling the loss and recovery of electric power, *J.K. Vaurio and P. Tammi* 281

Instructions to Contributors 295

CONTENTS OF ISSUE 157(3)

Extended and Updated Selected Papers from SMiRT-12, Postconference Seminar 4

Guest Editors: R. Krieg, A. Huber and A. Marchertas

Preface, *R. Krieg, A. Huber and A. Marchertas* ix
GKN I and GKN II: Reactor containment pressure relief and measures against hydrogen energy release in case of severe accidents, *J. Kolditz* 299
Hydrogen reduction following severe accidents using the dual recombiner–igniter concept, *R. Heck, G. Kelber, K. Schmidt and H.J. Zimmer* 311
Protection of the containment of the twin BWR KRB II plant against overpressure failure during severe accidents, *W. Reim and D. Hurlebaus* 321

Pressure release of containments during severe accidents in Switzerland, *H. Rust, Ch. Tännler, W. Heintz, D. Haschke, M. Nuala and R. Jakab* 337
Verification of design characteristics of the RBMK-1500 accident confinement system, *E. Ušpuras, A. Kaliatka and K. Almenas* 353
The evaluation of the bubble condenser containment of VVER-440/213 plants, *H. Karwat* 363
Accident loads for a VVER-440/213 containment, *Z. Téchy, G. Lajtha and R. Taubner* 375
Accident localization system with jet condensers for VVER 440–V 230 NPP at Jaslovské Bohunice, *J. Muráni* 387
Transient cooling of shallow debris beds in the first two FARO–LWR experiments, *H.U. Wider* 395
Fluid-dynamic loading during lower head failure, *G. Jacobs* 409
A multi-crucible core-catcher concept: Design considerations and basic results, *I. Szabo, P. Richard, Y. Bergamaschi and J.M. Seiler* 417
Experiments for a core catcher concept based on water addition from below, *W. Tromm and H. Alsmeyer* 437
Large spreading of core melt for melt retention–stabilization, *H.A. Weisshäupl and D. Bittermann* 447
Probabilistic evaluation of concrete containment capacity for beyond design basis internal pressures, *H.T. Tang, R.A. Dameron and Y.R. Rashid* 455
The passive ALWR approach to assuring containment integrity, *J.C. DeVine, Jr., W. Layman, D.E.W. Leaver and J. Santucci* 469
Current state of knowledge on the behavior of steel liners in concrete containments subjected to overpressurization loads, *W.A. von Riesemann and M.B. Parks* 481

Contents of Volume 157 489
Author Index of Volume 157 493
Subject Index of Volume 157 497
Instructions to Contributors 499